12EL6

TWIN DIODE—HIGH-MU TRIODE

7-PIN MINIATURE TYPE

For use in automobile radio receivers operating directly from 6-cell storage-battery systems

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage range (DC)	10 to 15.9	volts

This voltage range is on an absolute basis. For longest life, it is recommended that the heater be operated within the voltage range of 11 to 14 volts.

Current (Approx.) at 12.6 volts	0.15	amp
Direct Interelectrode Capacitances (Approx.):°		
Triode grid to triode plate	1.8	μμf
Triode grid to cathode and heater	2.2	μμf
Triode plate to cathode and heater	1	μμf
Diode-No.1 plate to diode-No.2 plate	1	μμf

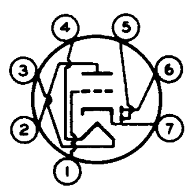
Characteristics, Class A_1 Amplifier (Triode Unit):

Heater Voltage	12.6	volts
Plate Voltage	12.6	volts
Grid Voltage	0	volts
Amplification Factor	55	
Plate Resistance (Approx.)	45000	ohms
Transconductance	1200	μmhos
Plate Current	750	μa

Mechanical:

Operating Position	Any
Maximum Overall Length	2-1/8"
Maximum Seated Length	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip)	1-1/2" ± 3/32"
Diameter	0.650" to 0.750"
Dimensional Outline	*See General Section*
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW	7FB

Pin 1 - Triode Grid
Pin 2 - Triode Plate
Pin 3 - Heater
Pin 4 - Heater



Pin 5 - Diode-No.2 Plate
Pin 6 - Diode-No.1 Plate
Pin 7 - Cathode

TRIODE UNIT — AMPLIFIER — Class A_1

Maximum Ratings, ***Design-Center Values:***

PLATE VOLTAGE	30 max.	volts
CATHODE CURRENT	20 max.	ma

° Without external shield.

ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode. . .	30 max.	volts
Heater positive with respect to cathode. . .	30 max.	volts

Typical Operation:

As resistance-coupled amplifier

Heater Voltage	12.6	volts
Plate Supply Voltage	12.6	volts
Grid Voltage	0	volts
Plate Load Resistor.	1	megohm
Grid Resistor.	1	megohm
Grid Resistor of Following Stage	2	megohms
Input Capacitor.	0.02	μf
Output Capacitor	0.01	μf
Voltage Gain at 400 cps with RMS output volts = 1.	16	

Maximum Circuit Values:

Grid-Circuit Resistance.	10 max.	megohms

DIODE UNITS — Two

Values are for Each Unit

Maximum Ratings, ***Design-Center Values:***

PLATE CURRENT.	1 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode. .	30 max.	volts
Heater positive with respect to cathode. .	30 max.	volts

Characteristics:

Heater Voltage	12.6	volts
Plate Current for plate volts = 10	2	ma